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Microgrid Multi-Objective Optimization Model

This paper proposes a scenario-based multi-objective optimization model for grid-connected microgrid considering the cost and carbon emissions to realize the optimization of economy-environmental ...

This paper presents a novel multi-objective stochastic optimization model for the optimal operation of a coalition of interconnected smart microgrids, integrating renewable energy...

This paper presents a model of multi-objective optimal dispatch of microgrid (MODMG) under uncertainties via the interval optimization (IO) approach. In this model, multiple objectives are ...

A multi-strategy Improved Multi-Objective Particle Swarm Algorithm (IMOPSO) method for microgrid operation optimization is proposed for the coordinated optimization problem of microgrid ...

Guo et al. (2025) proposed a three-objective scheduling strategy for islanded microgrids based on an improved MOPSO algorithm. By enhancing parameter adjustment strategies and ...

In this regard, a multi-objective optimization scheduling model for microgrids in grid-connected mode is proposed, which comprehensively considers the operational costs and environmental protection ...

The optimal operation of microgrid (MG) is an important problem to attain significant benefits, which mainly improves the cost reduction in energy operation and

While existing studies on optimal energy dispatch focus on single-objective optimization or simpler algorithms, this research proposes a comprehensive strategy for both grid-connected and ...

In this paper, we establish a stochastic multi-objective sizing optimization (SMOS) model for microgrid planning, which fully captures the battery degradation characteristics and the total carbon emissions.

To solve these problems, a multi-objective optimization model was established based on the economy and the environmental protection of a microgrid including EVs.

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